

FIG. 1

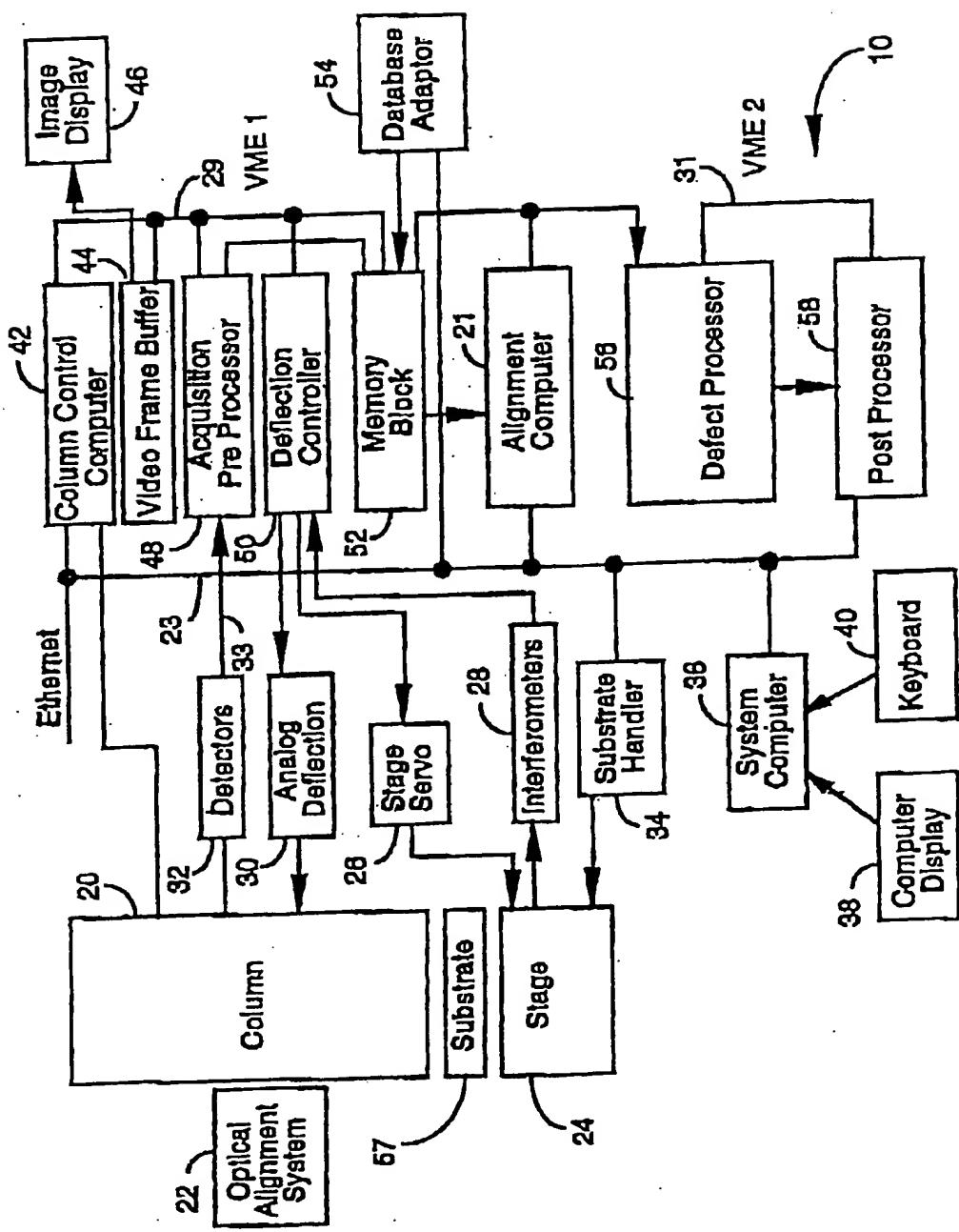


Fig. 2

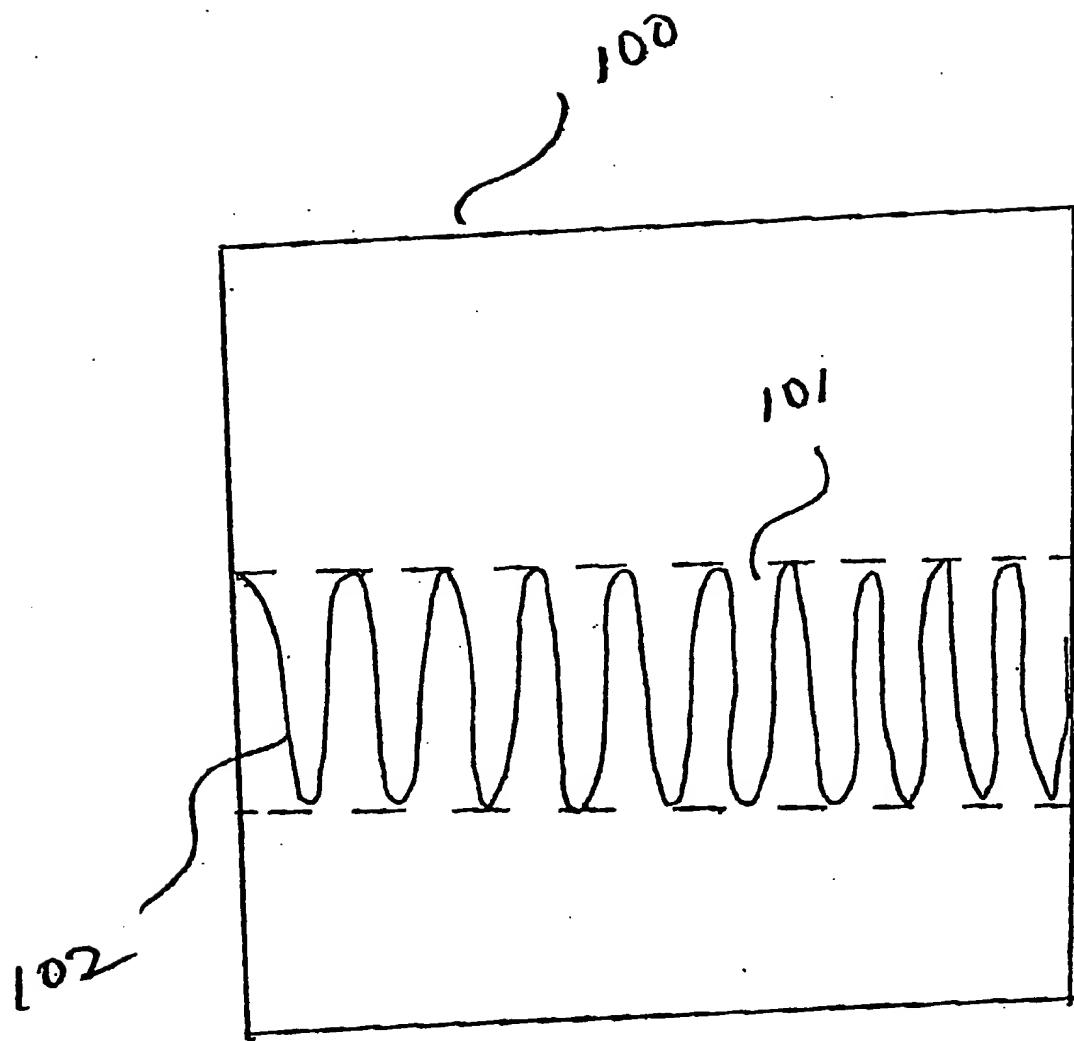
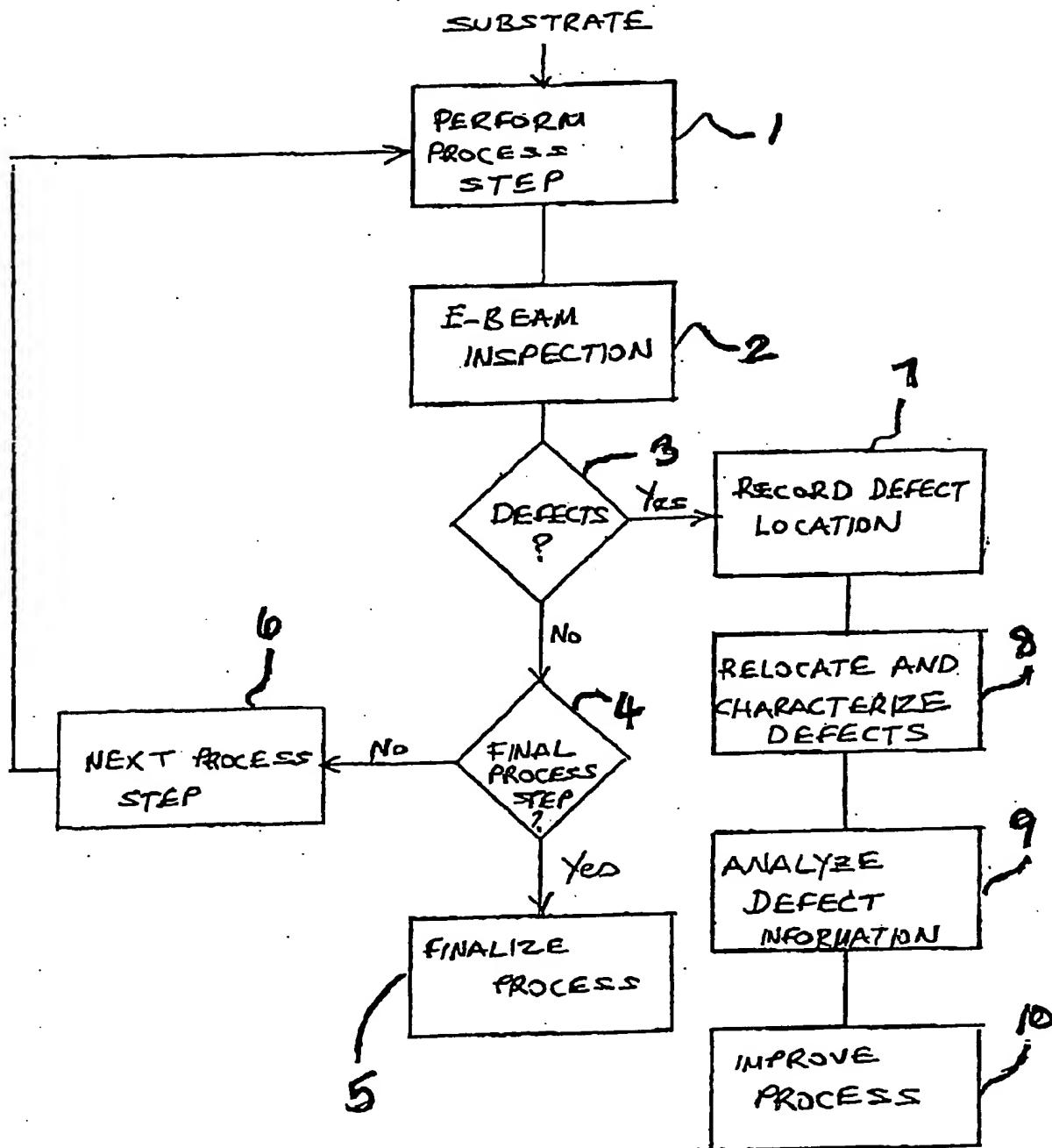


Figure 3



09648095 - 082500

FIGURE 4a

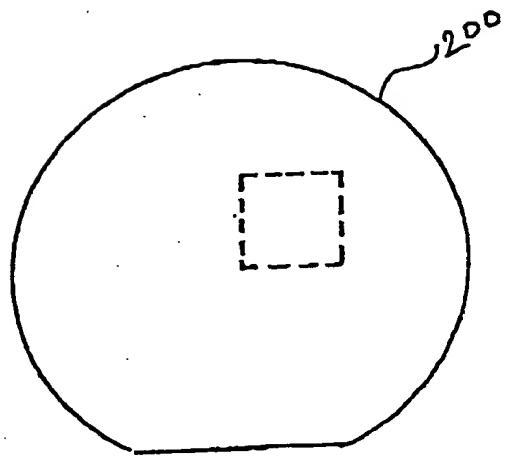
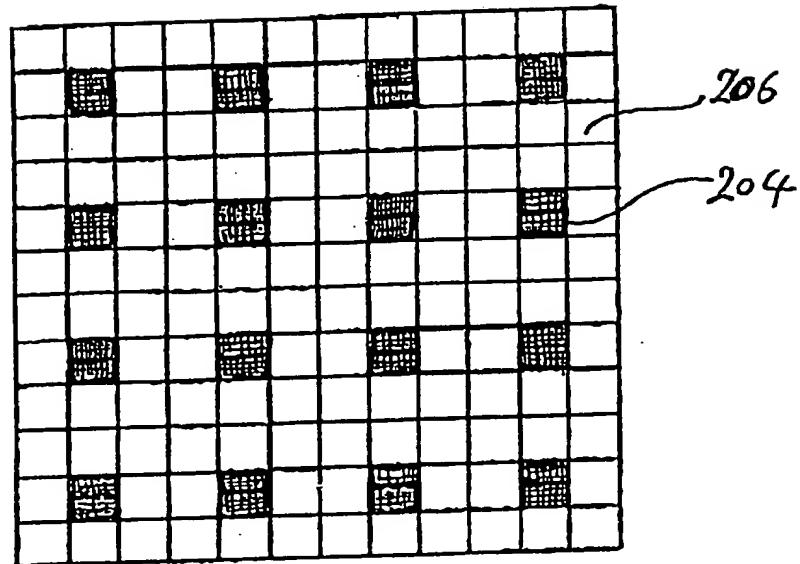


FIGURE 4b



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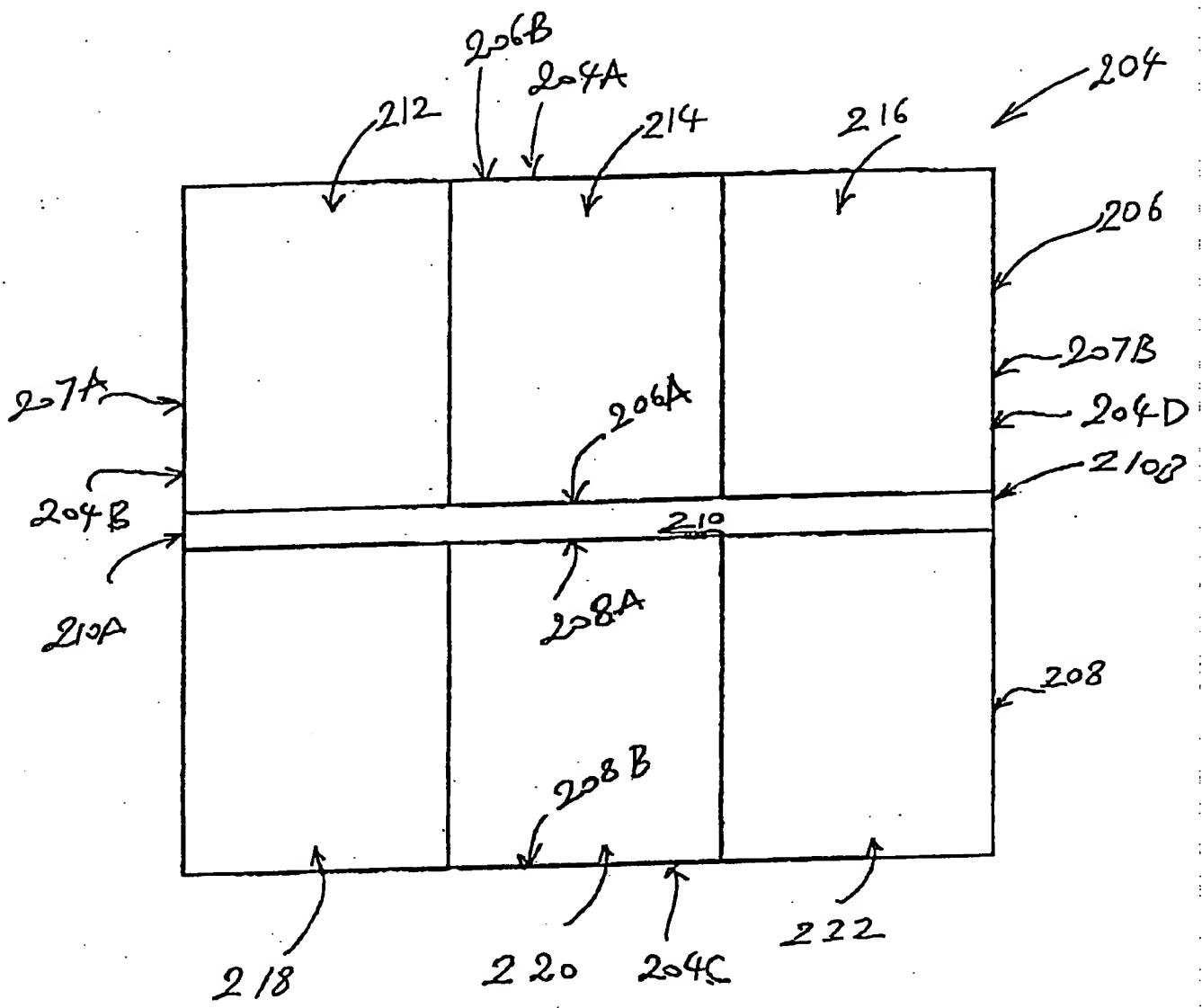


Fig. 4C

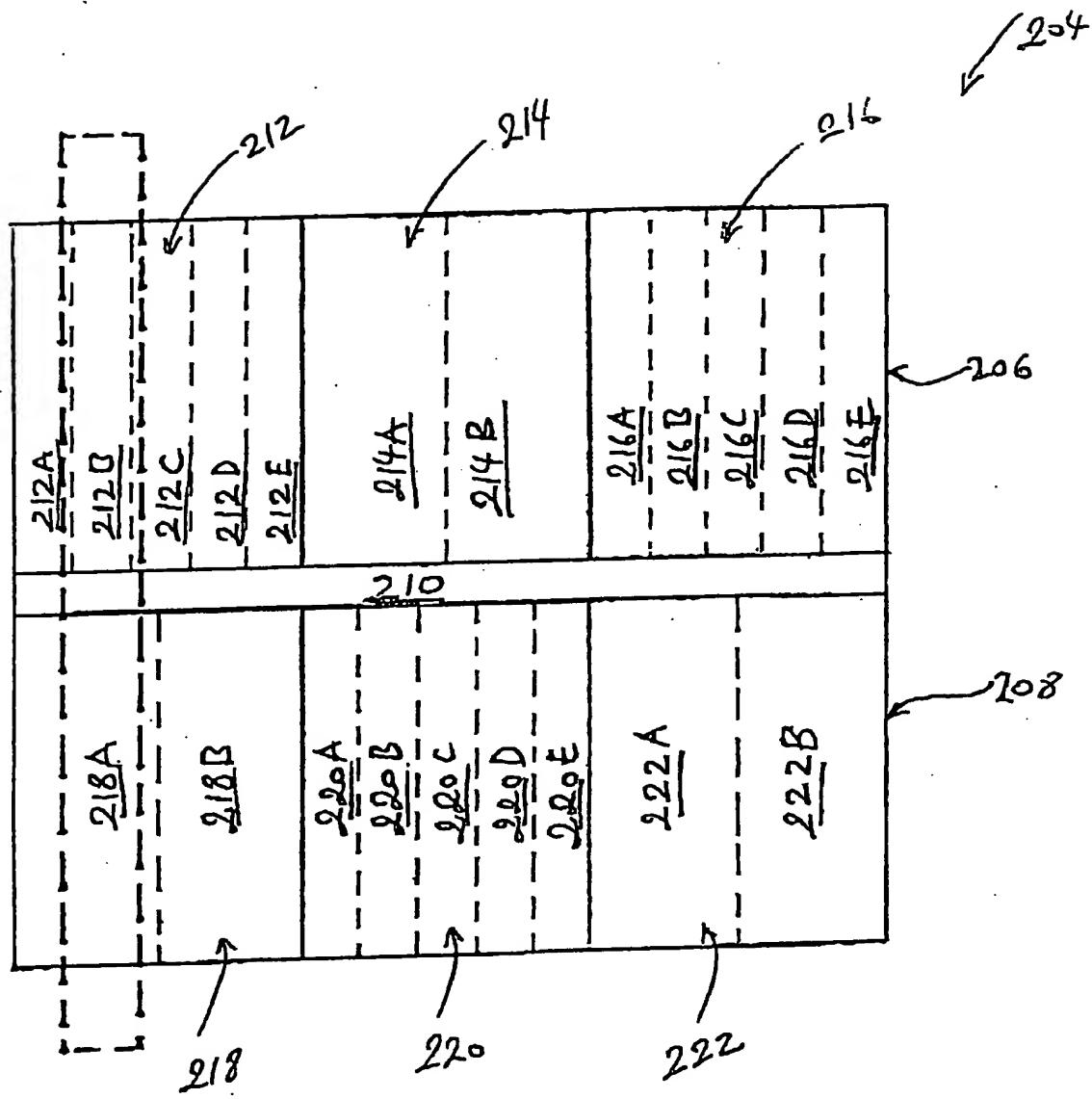


Fig. 4D

FIGURE 5

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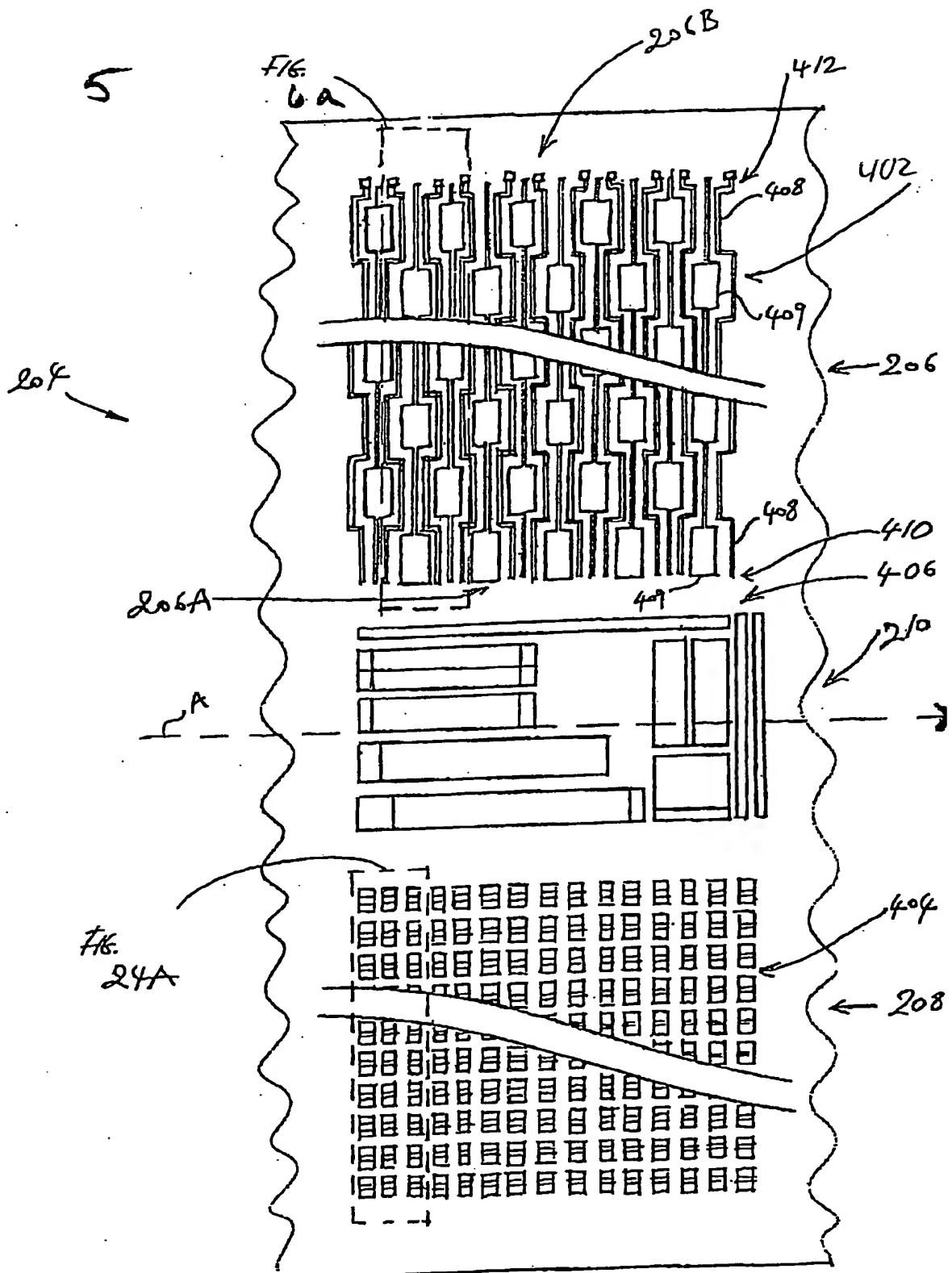


FIGURE 6a

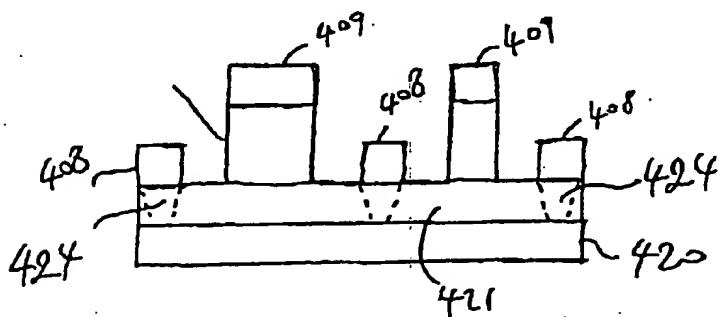
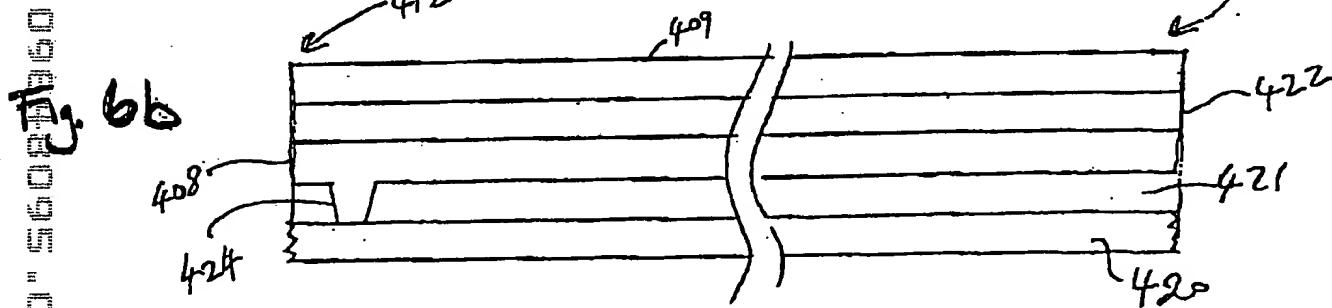
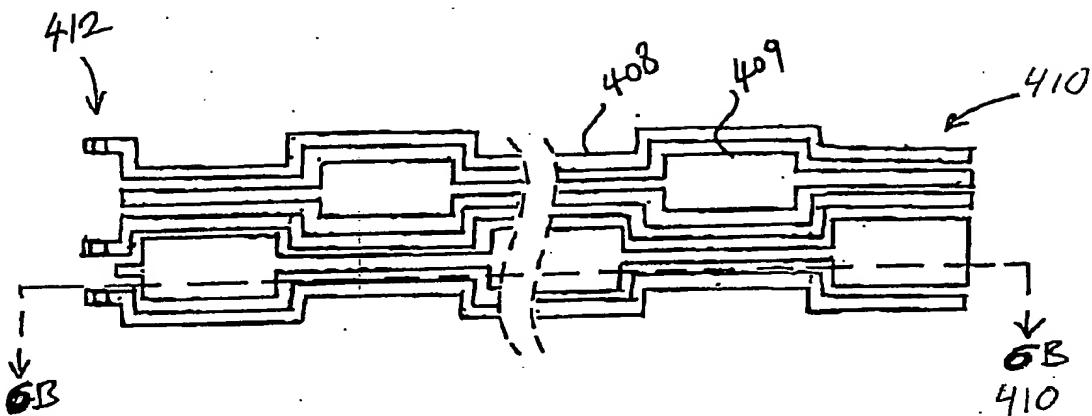


Fig. 6c

Figure 7a

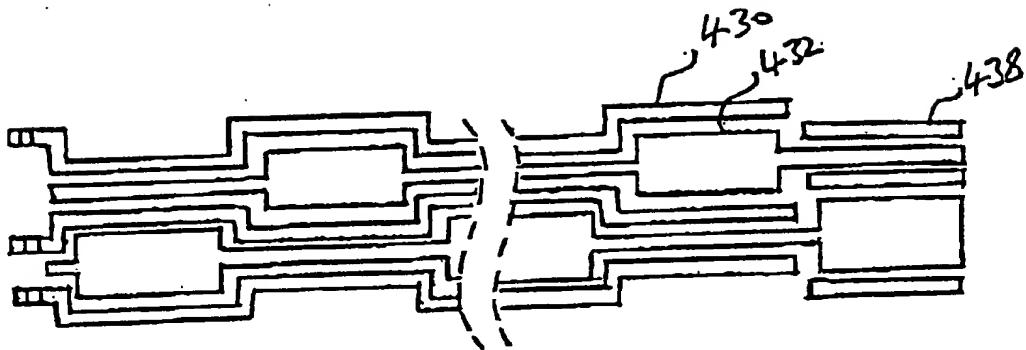


FIGURE 7b

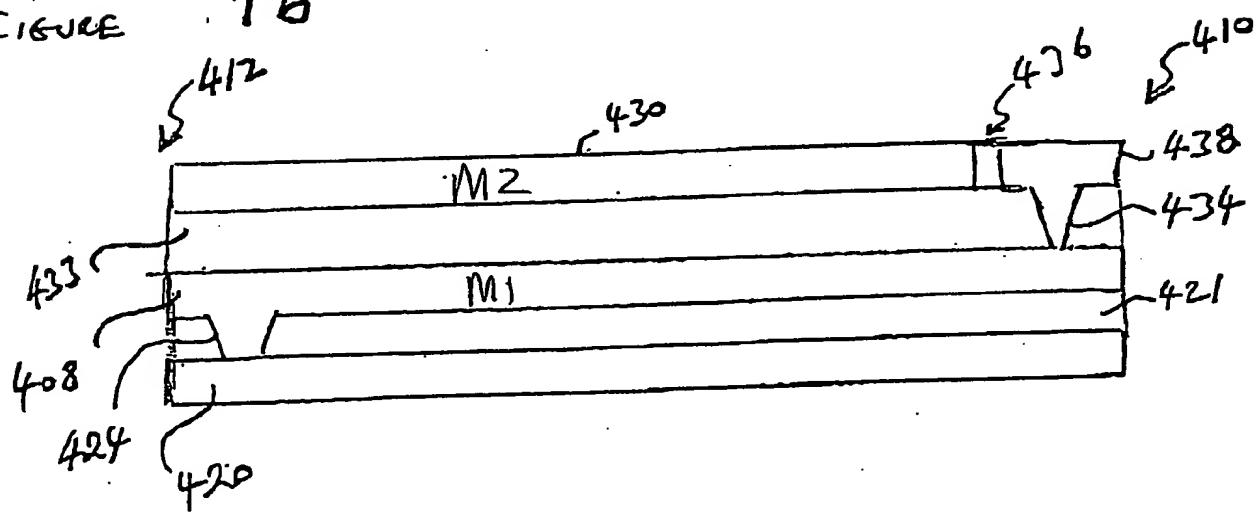
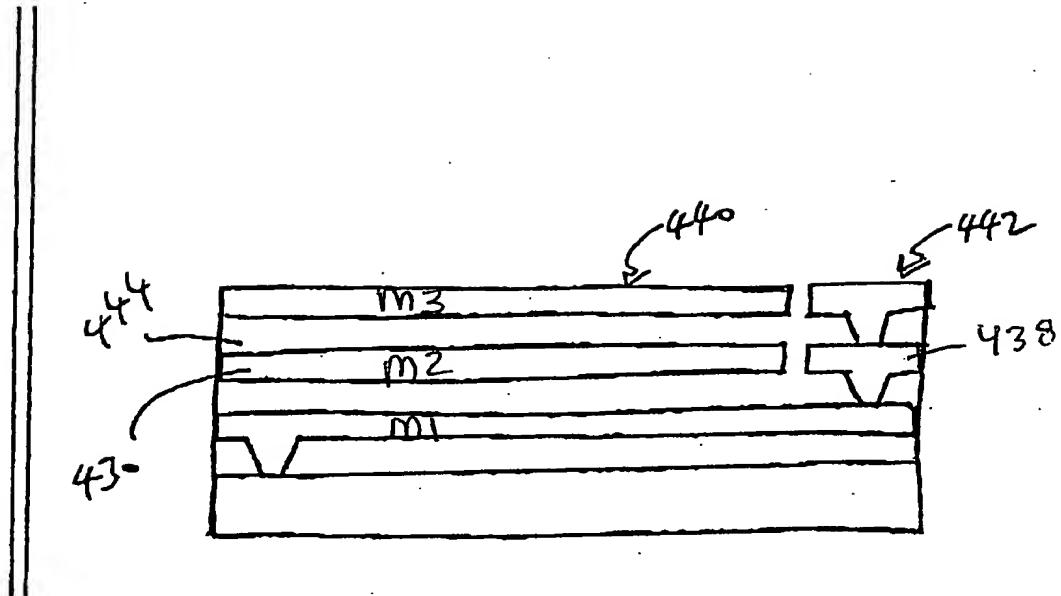


FIGURE 8



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FIGURE

9

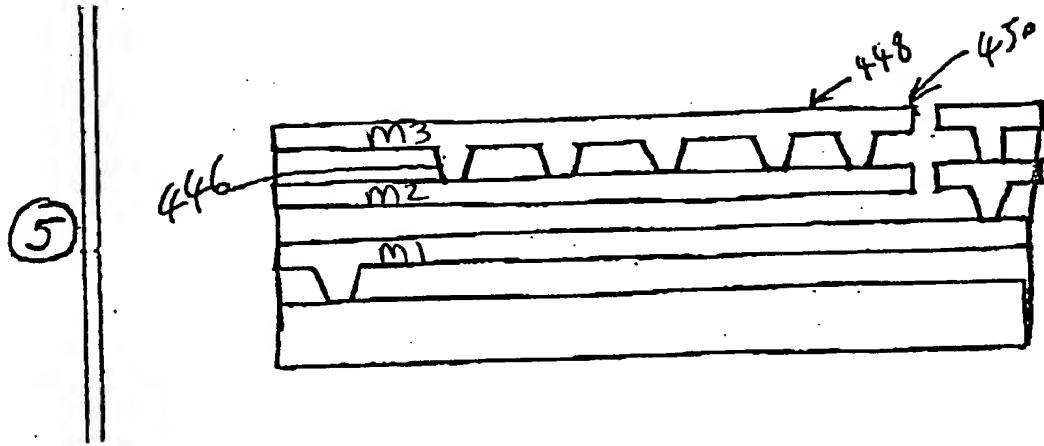


FIGURE 10

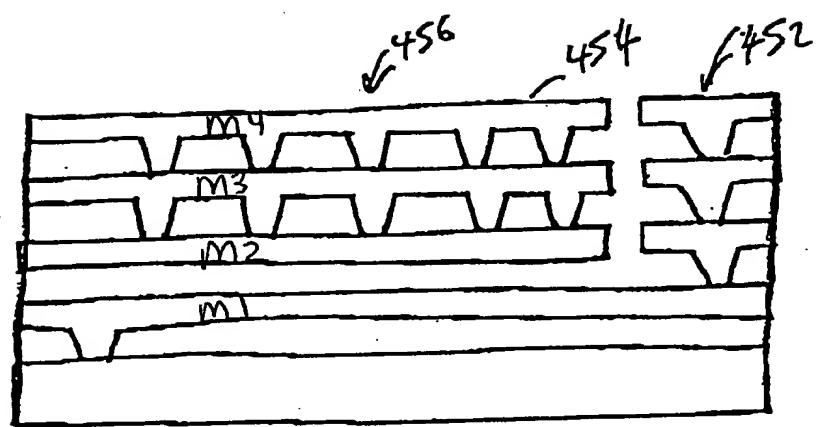


FIGURE  
11

00002800-56001960

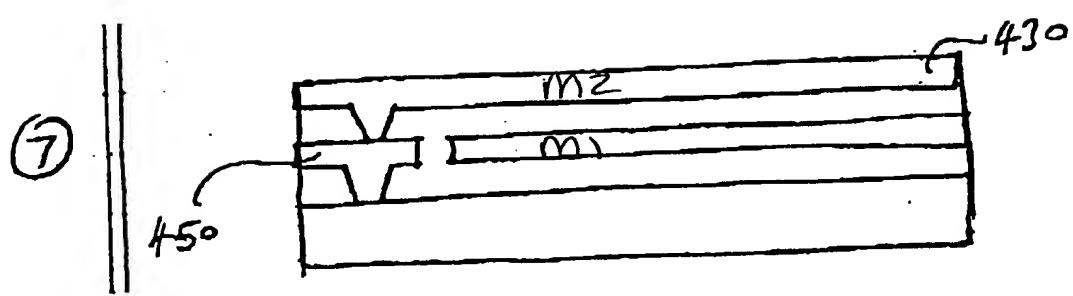


FIGURE 12

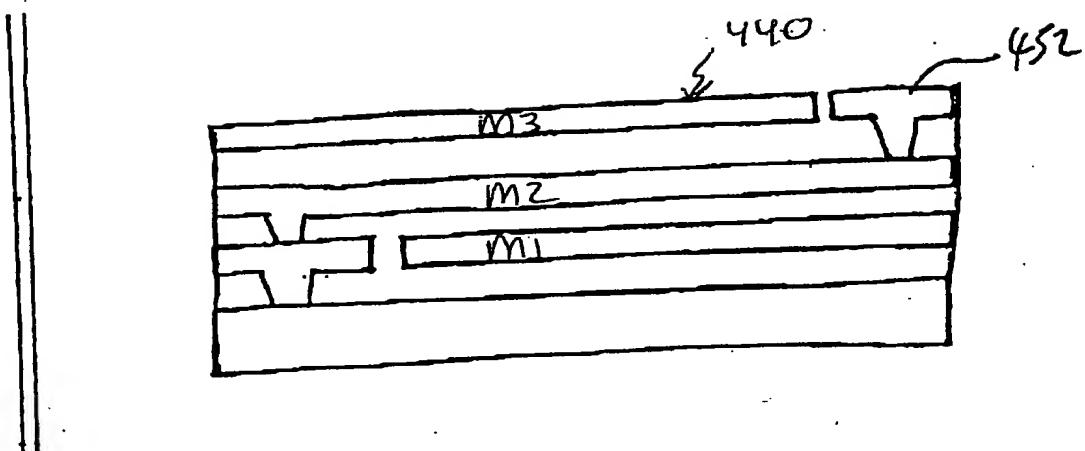
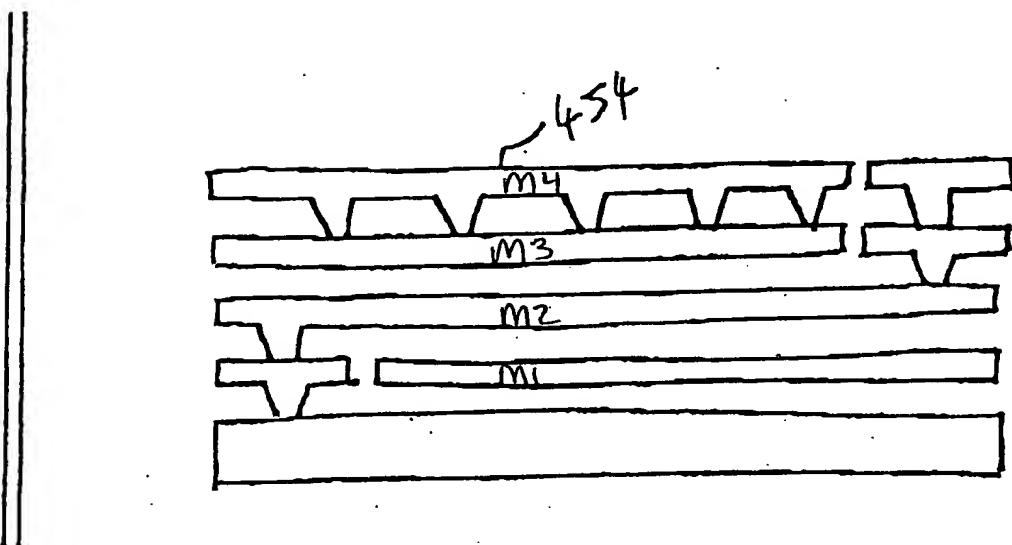
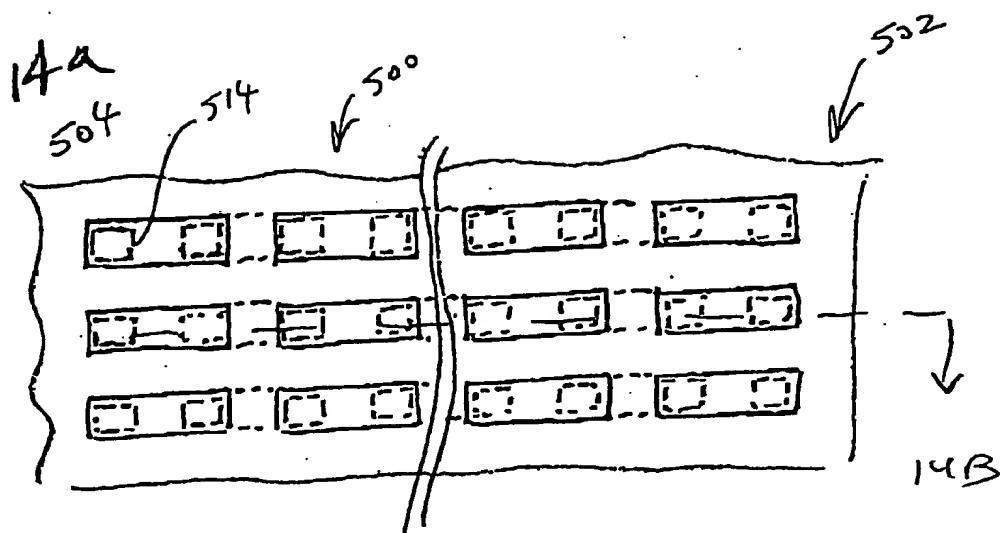


FIGURE 13



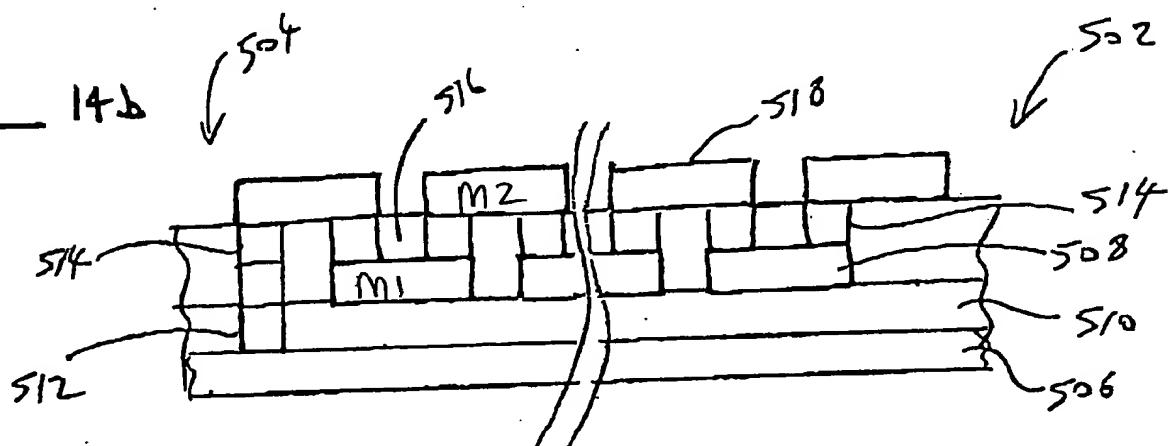
09648095 - 032500

FIGURE

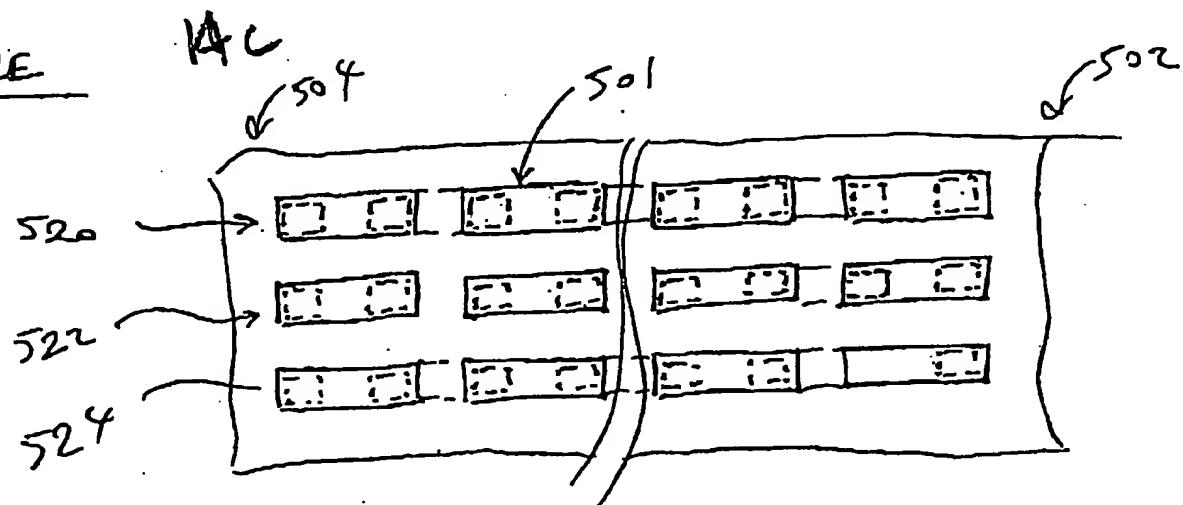


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FIGURE



FIGURE



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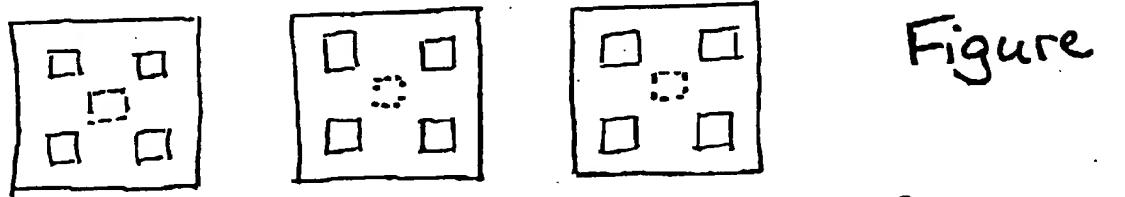
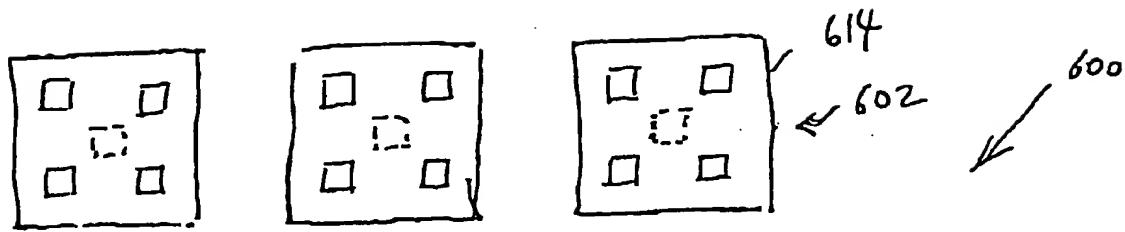


Figure 15A

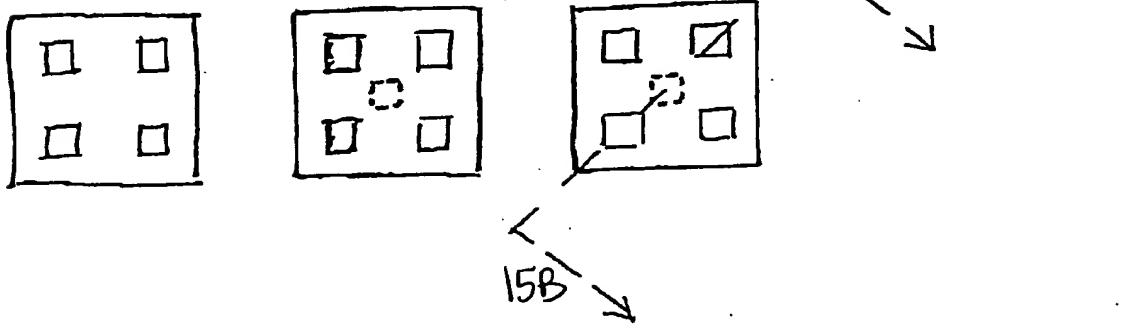


FIGURE 15B

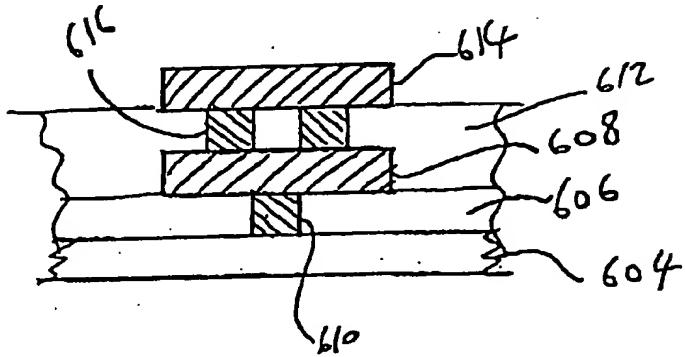


FIGURE 16A

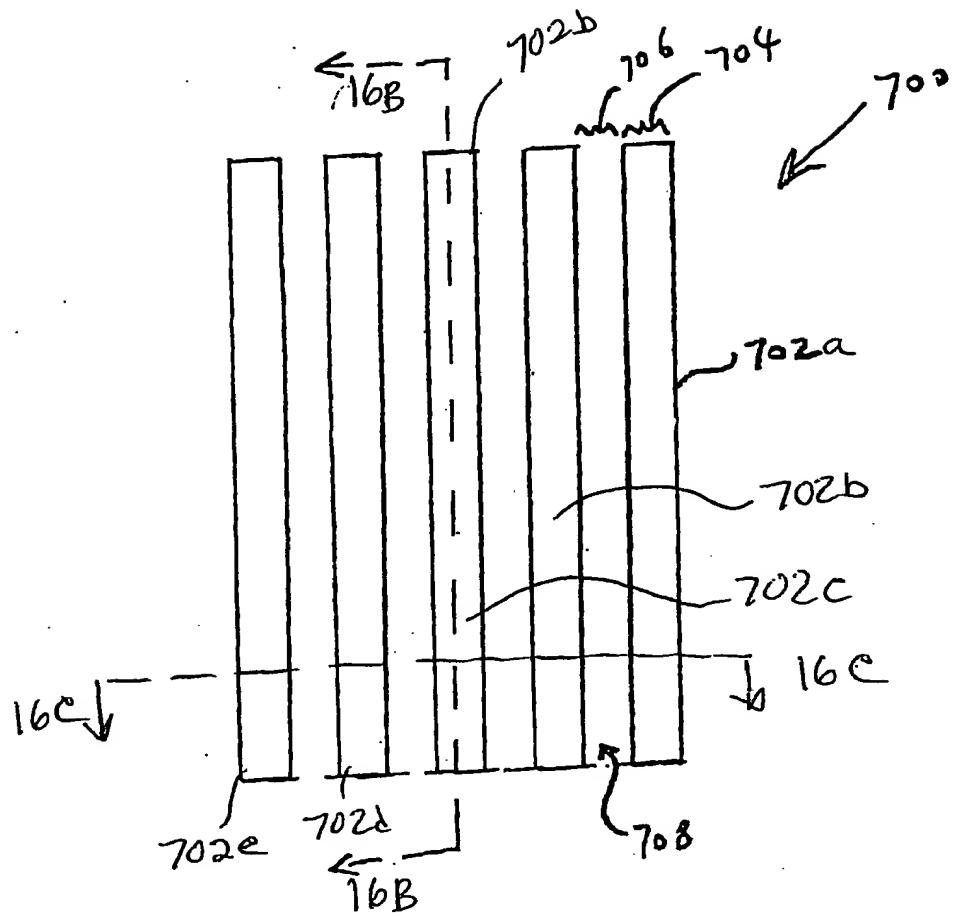


FIGURE 16B

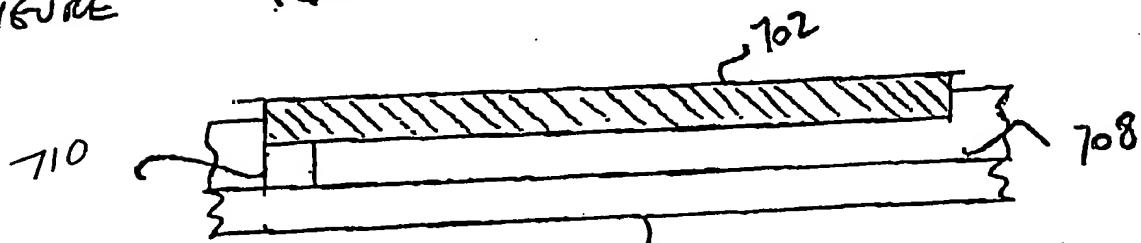
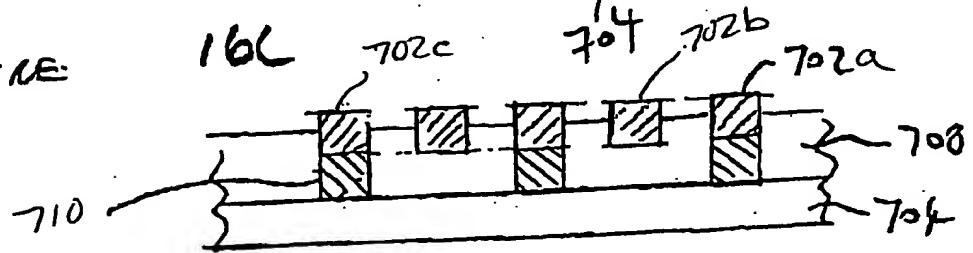
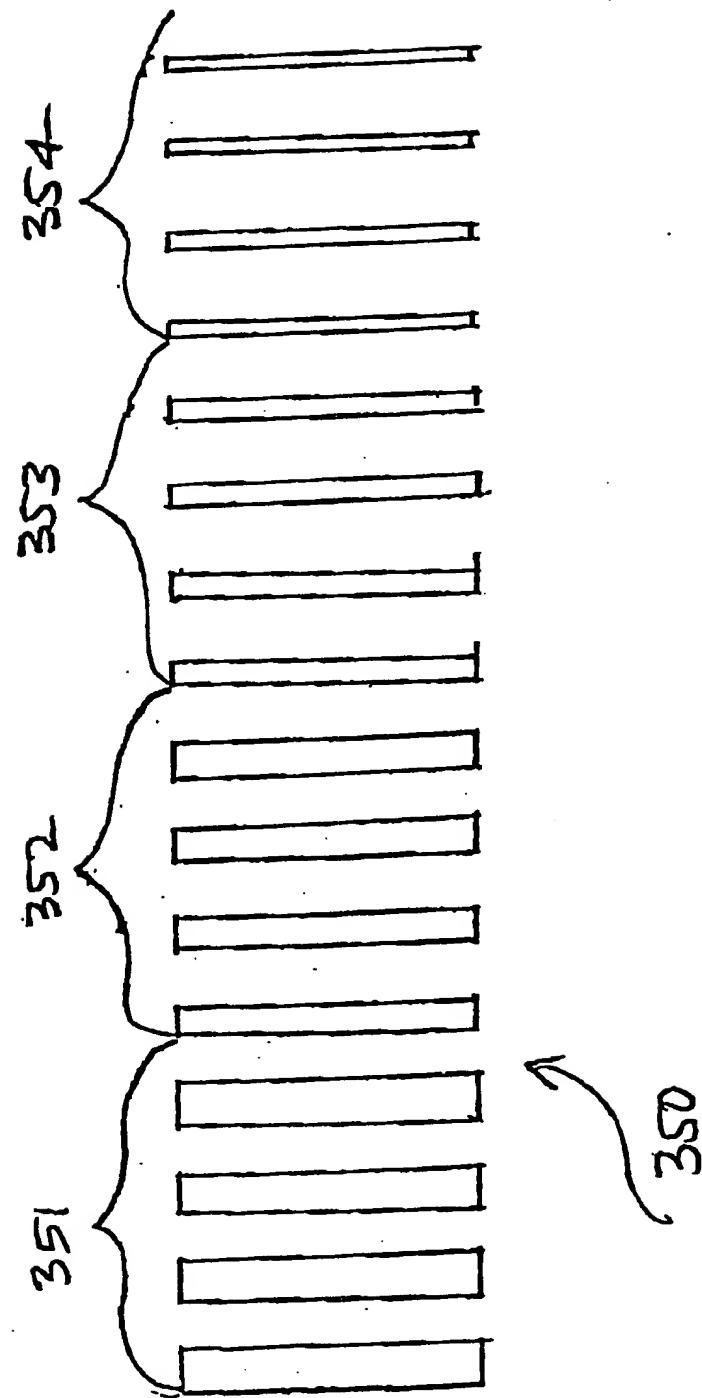


FIGURE 16C



00022305 "096480960

Fig. 17



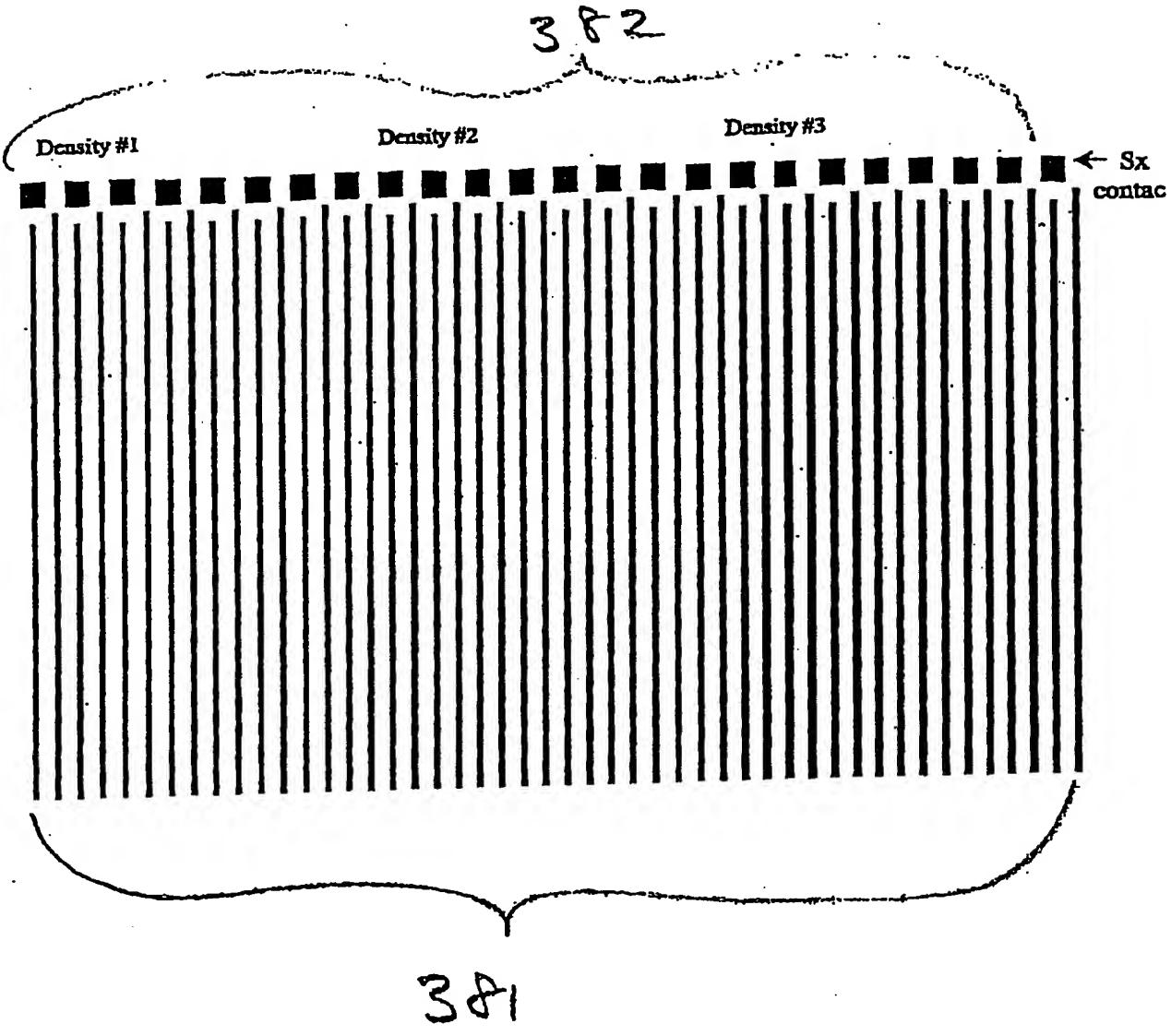
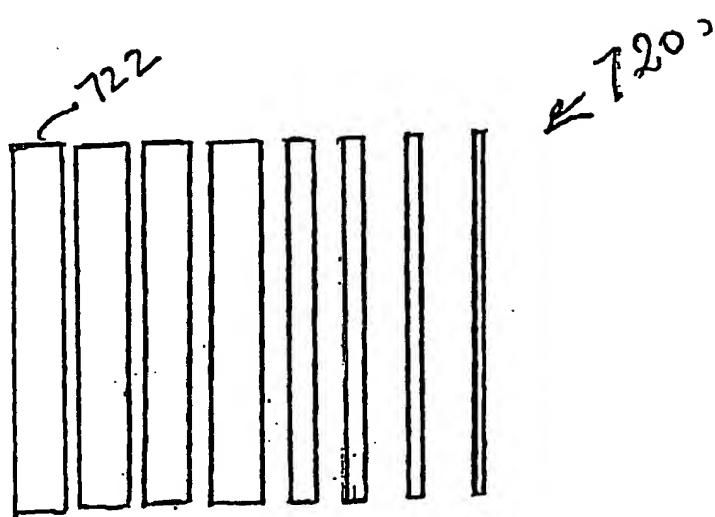


Fig. 18

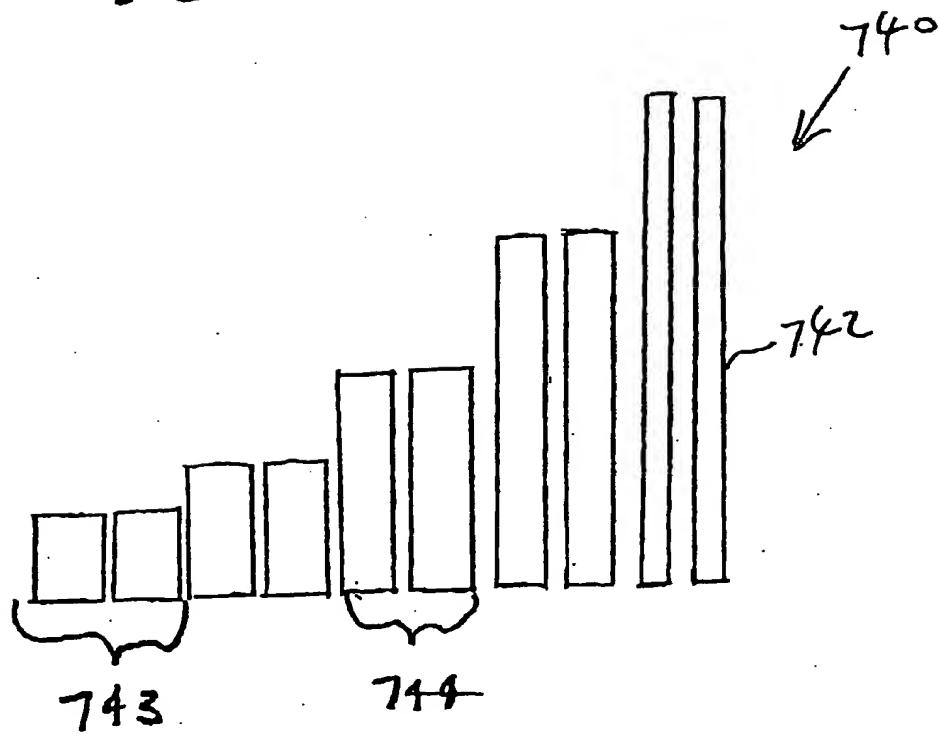
FIGURE. 19



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FIGURE

20



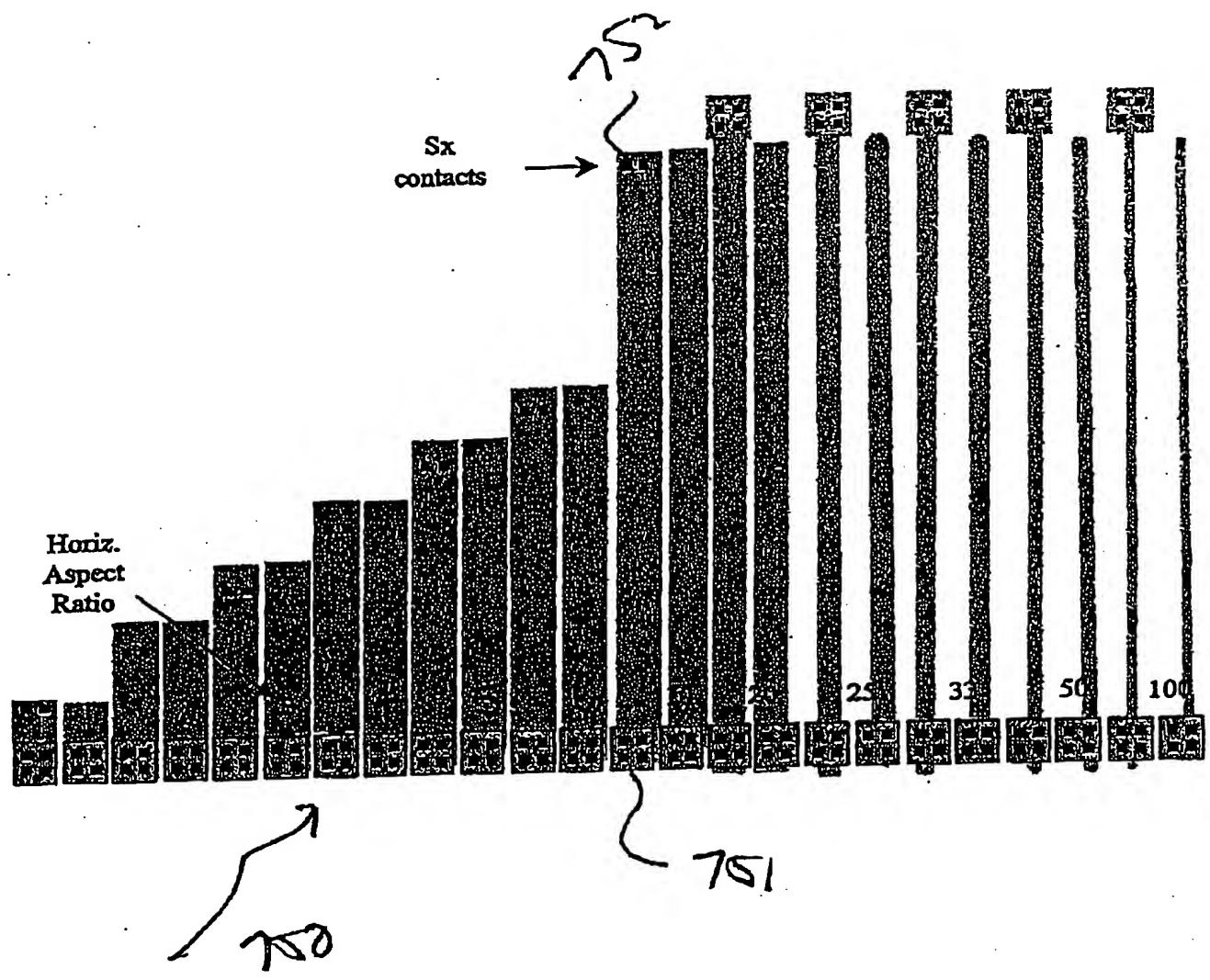


Figure 21

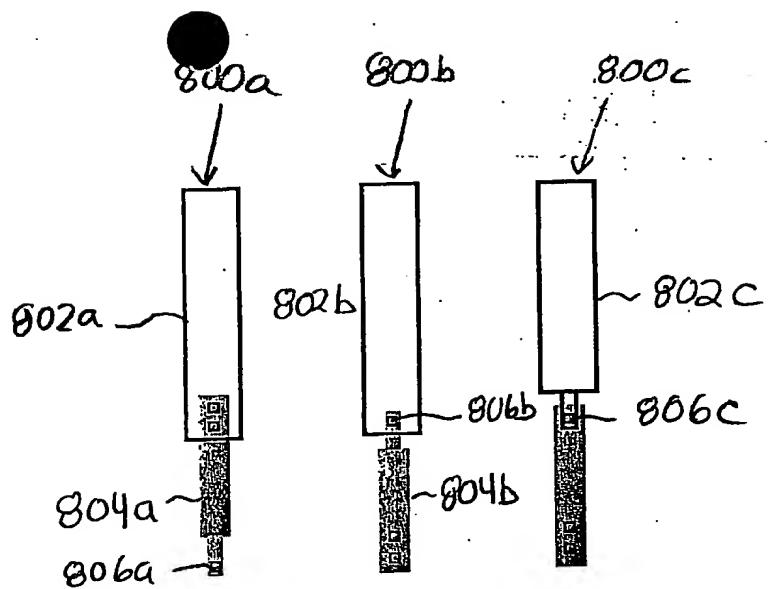


Figure 22A: X Overlay Structures: M1 to Contact, Via to M1, M2 to Via

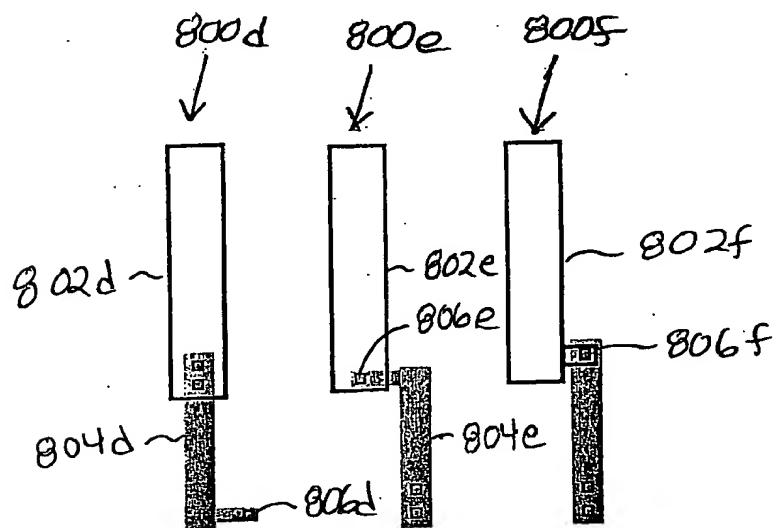


Figure 22B: Y Overlay Structures: M1 to Contact, Via to M1, M2 to Via

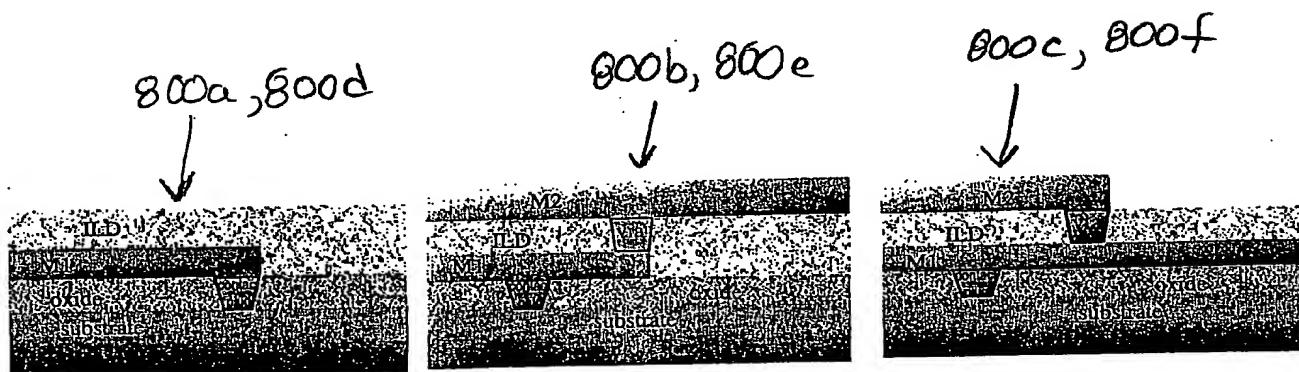


Figure 22C: Cross sections of overlay structures: M1 to Substrate, Via to M1, M2 to Via

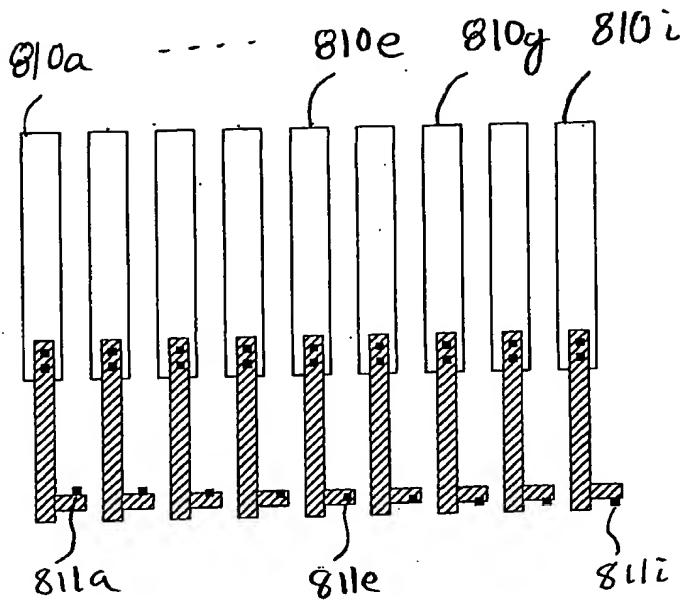


Figure 23A: A portion of the M1 to Contact, Y component, Overlay Structure

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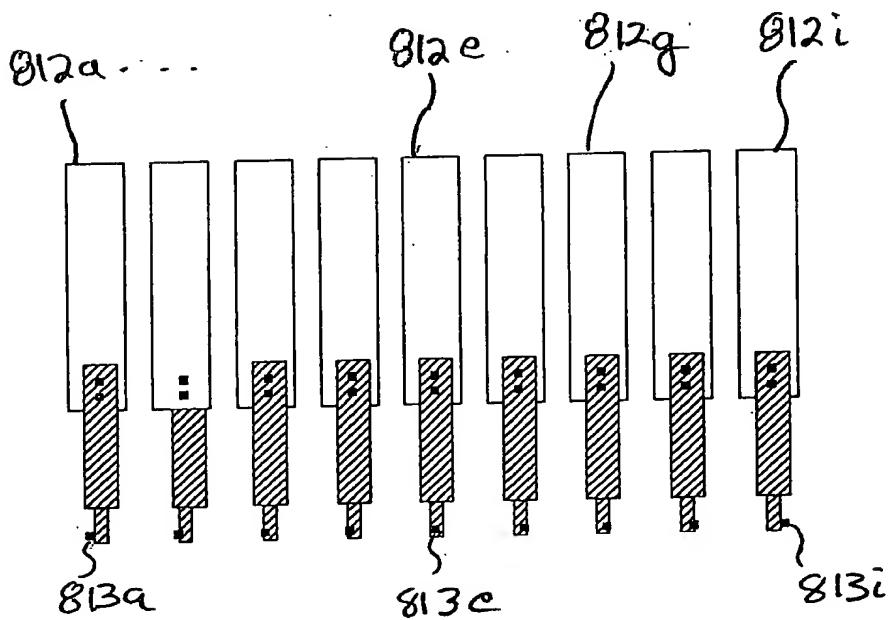
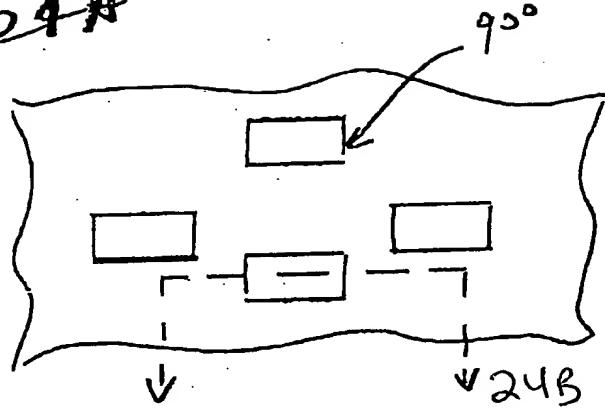


Figure 23B: A portion of the M1 to Contact, X component, Overlay Structure

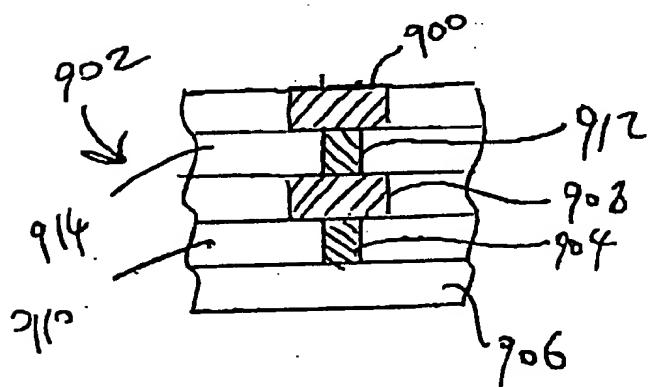
FIGURE

24A



FIGURE

24B



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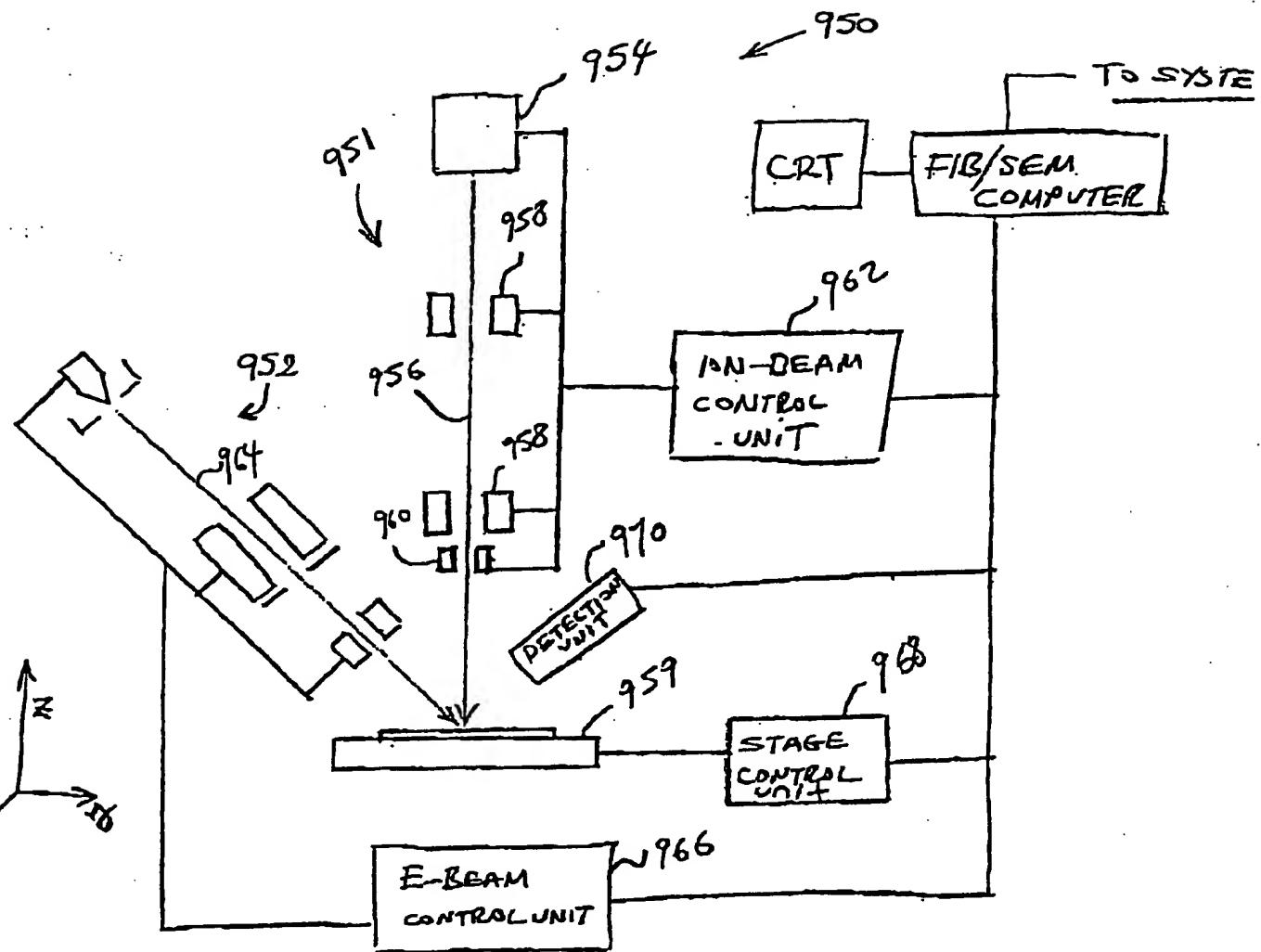


Fig. 25

09648095 - 092600

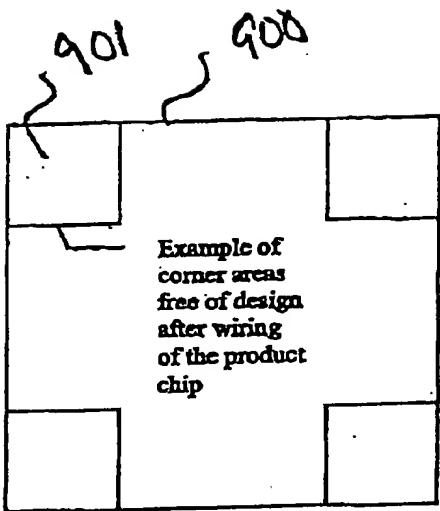


Fig. 26a: Product Chip with empty areas

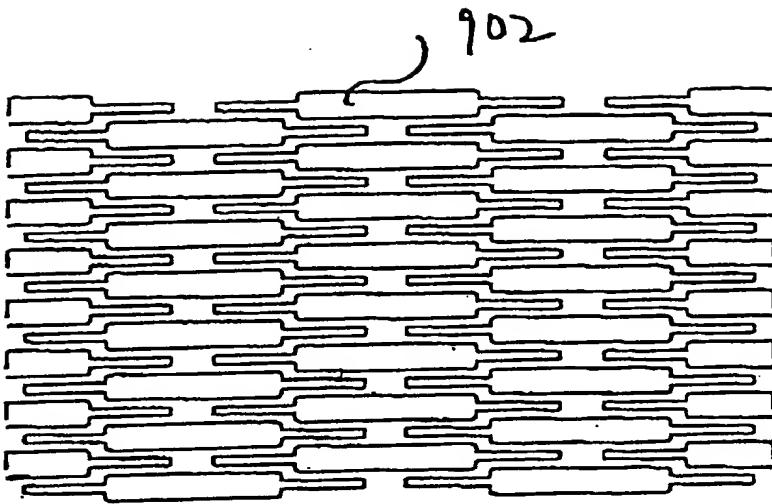


Fig. 26b: Typical "Filler Shapes" used to fill-in the empty areas

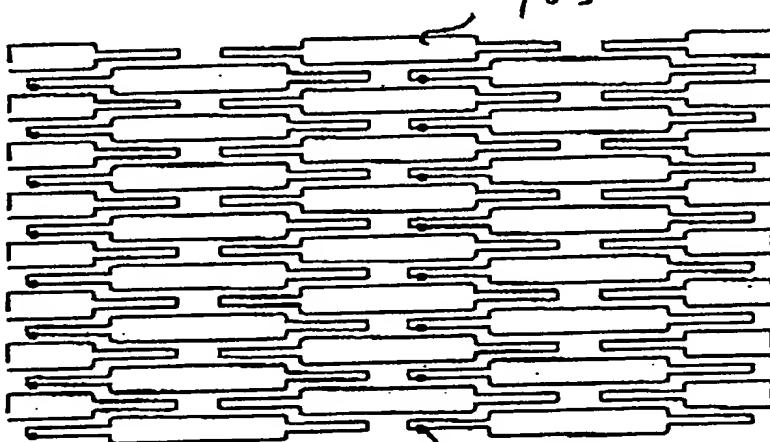
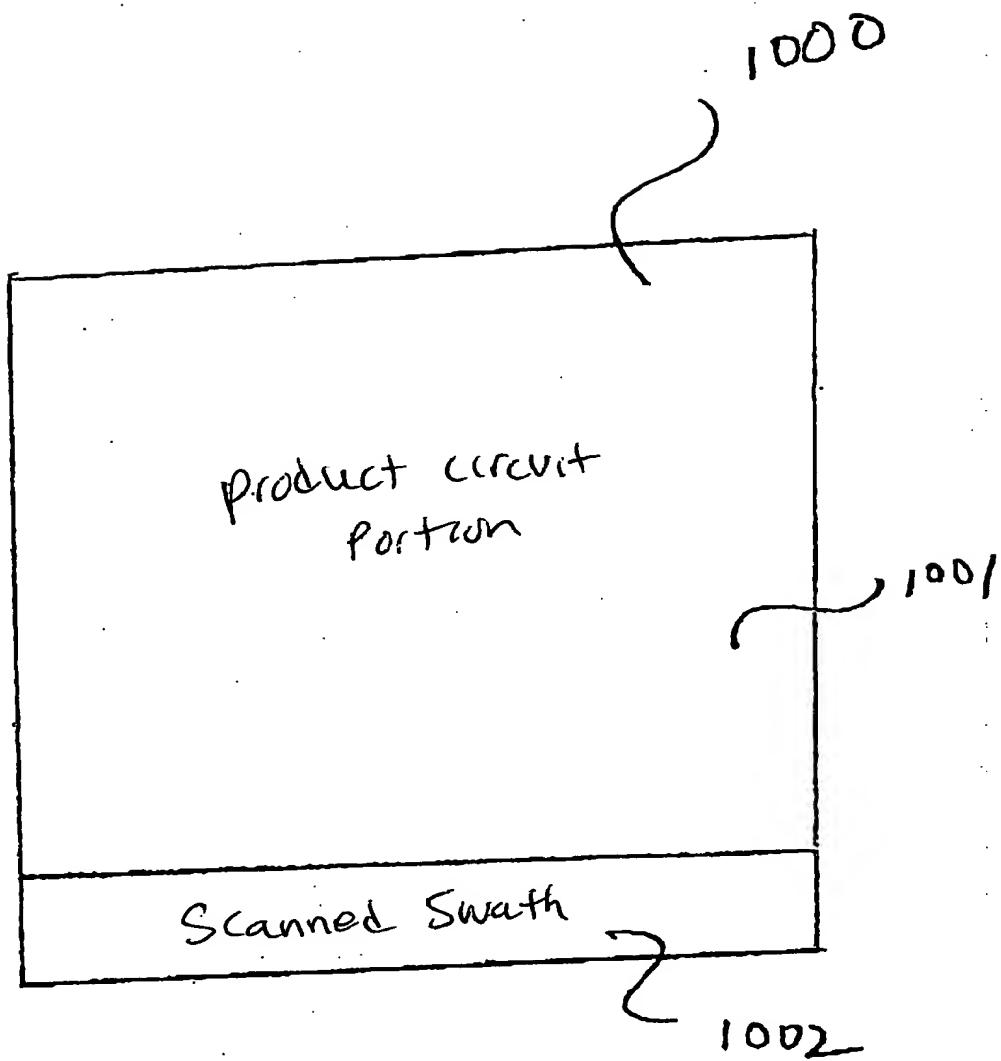


Fig. 26c: Redesign of Dummy Shapes into useful CMP Process Monitors

904

Fig. 27



09643055 - 0622500

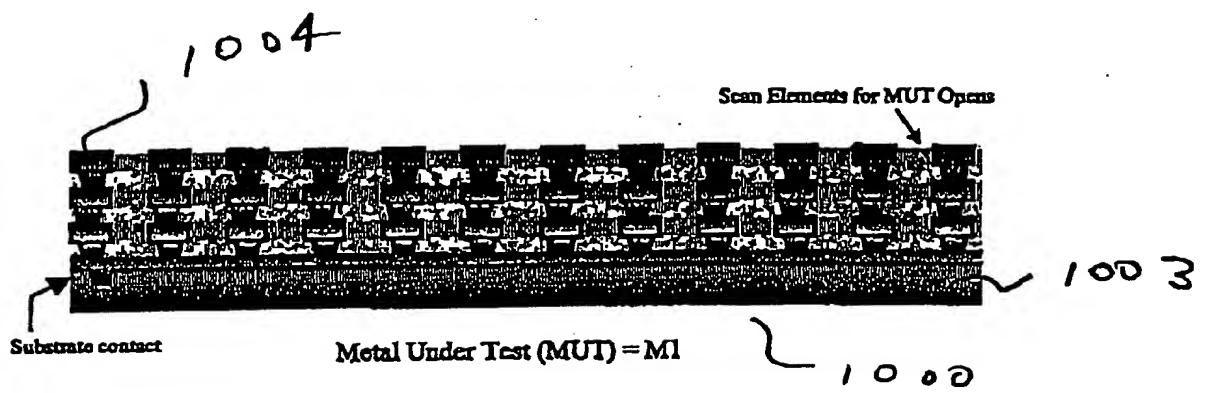
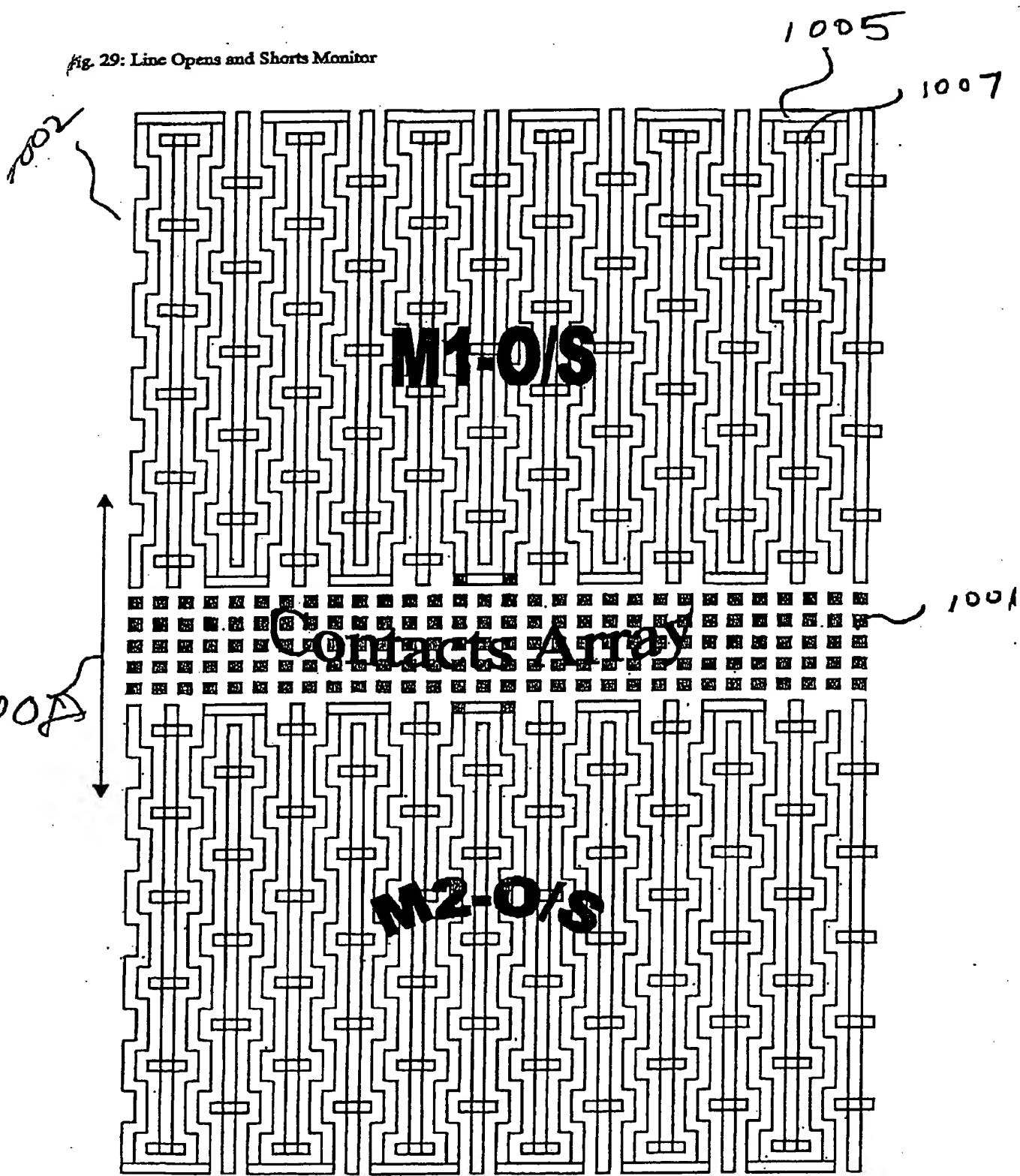


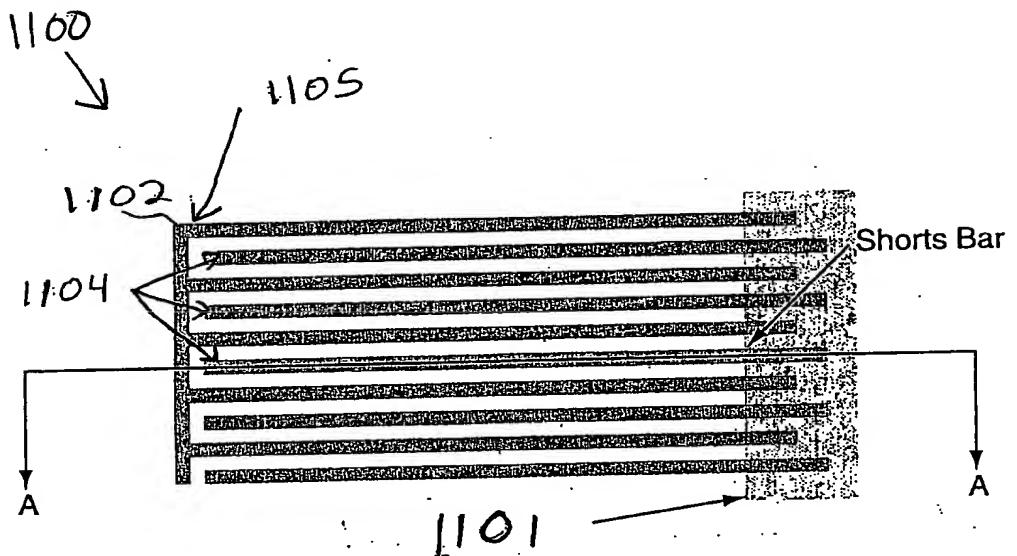
Fig. 28 : Cross-section View of the Vertical Taps over the Metal-under-Test Opens Monitor

009643095 - C623500

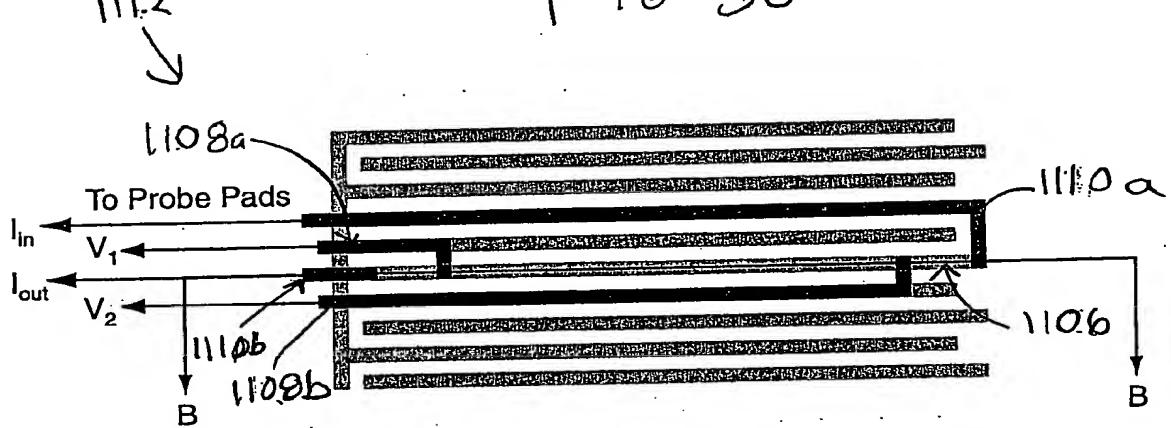
Fig. 29: Line Opens and Shorts Monitor

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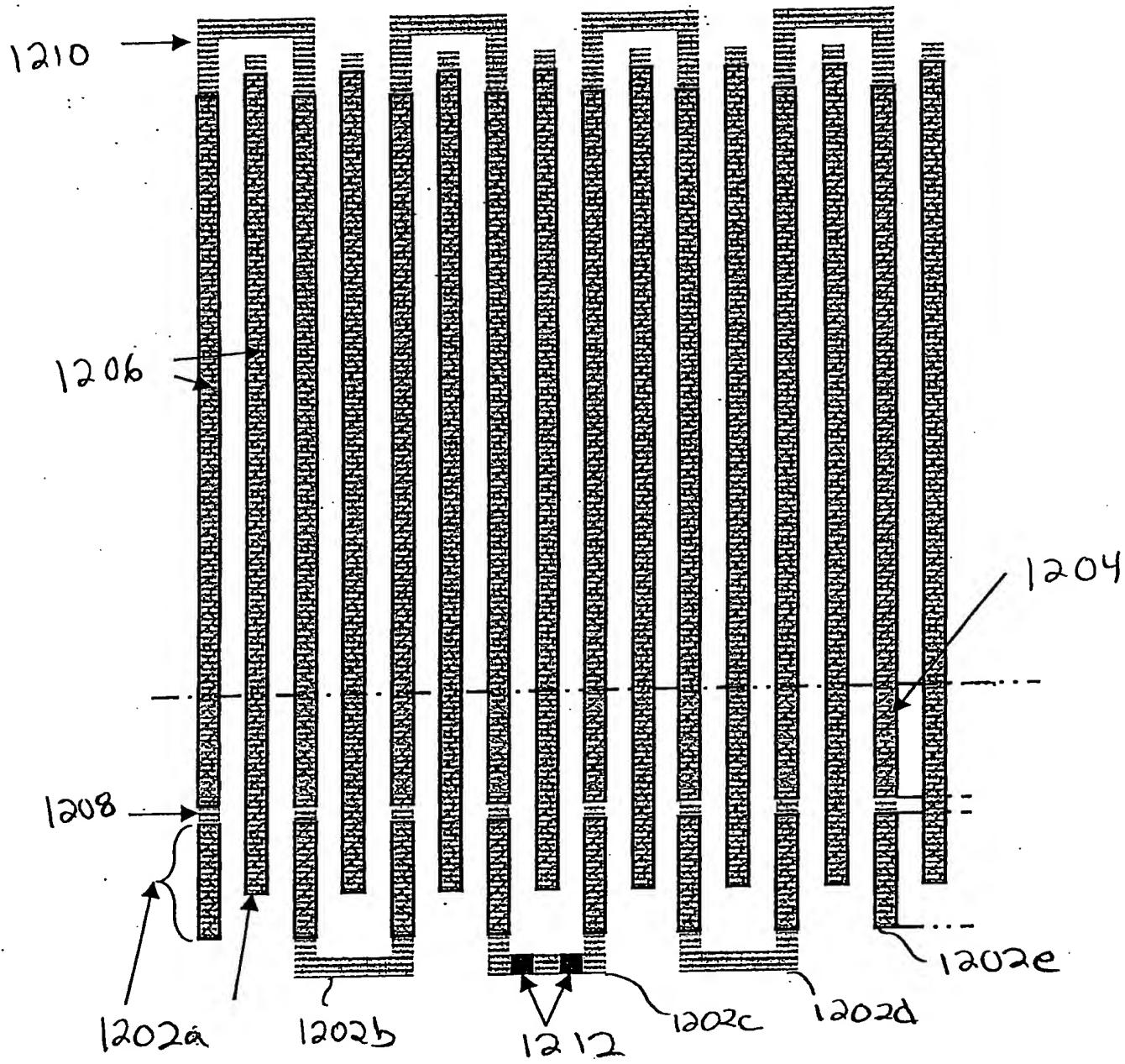


F16 30



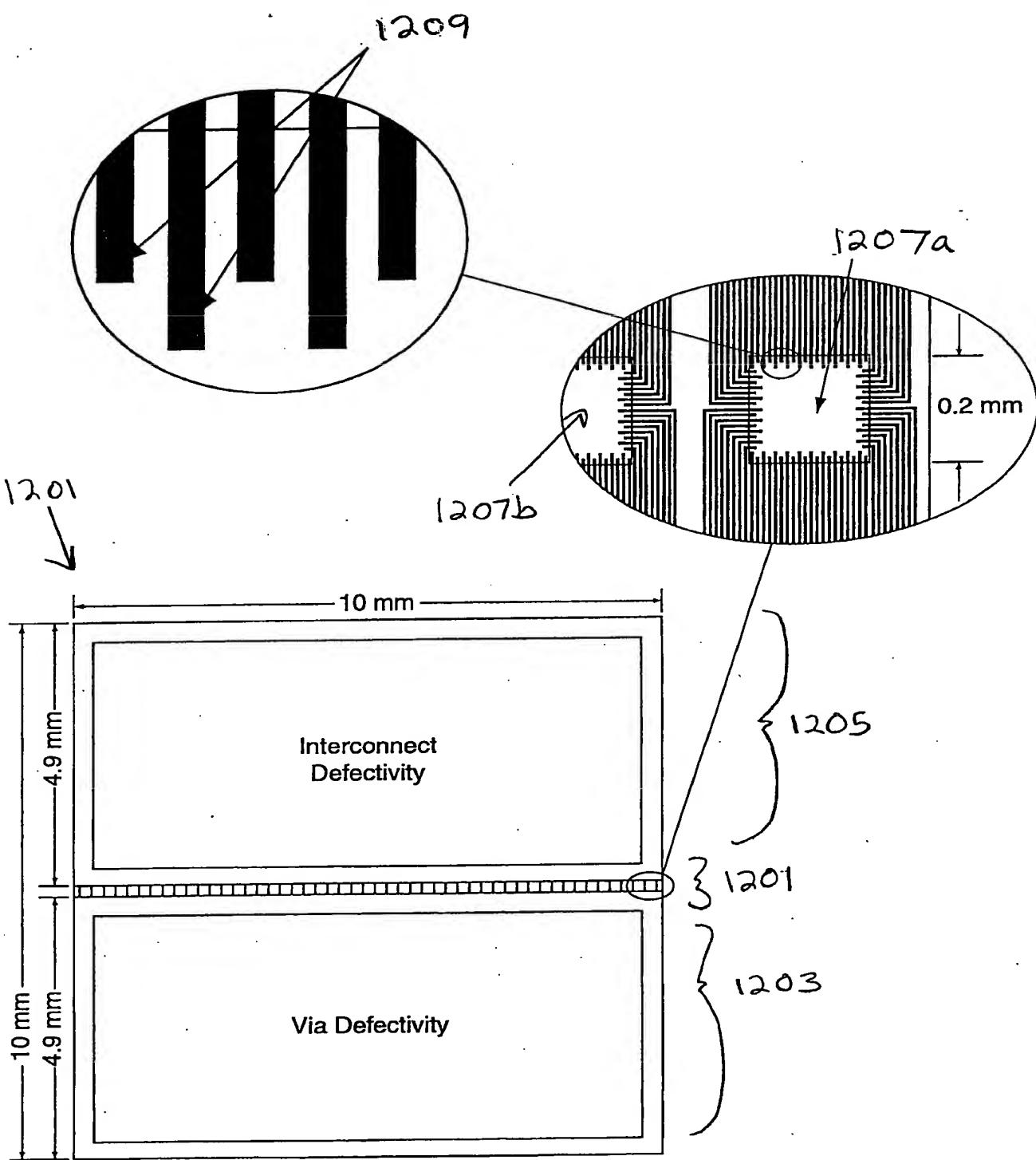
F16 31

00964-80955 "032500



F 16. 32

F16. 33



09649055 - 0822500

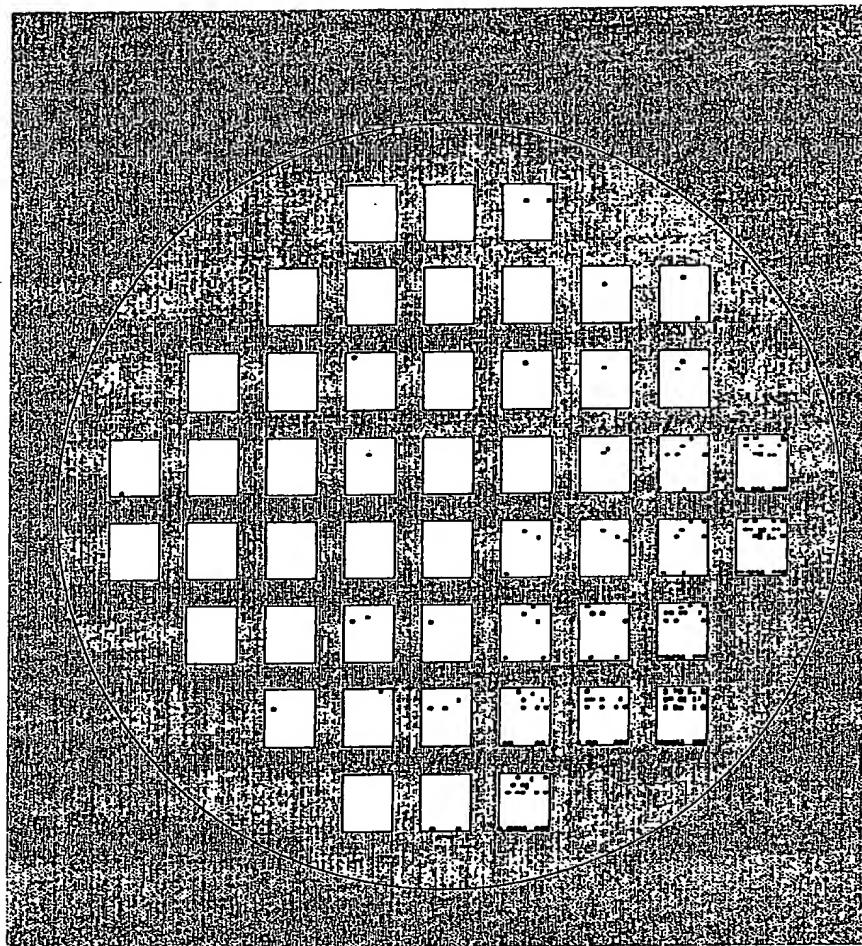
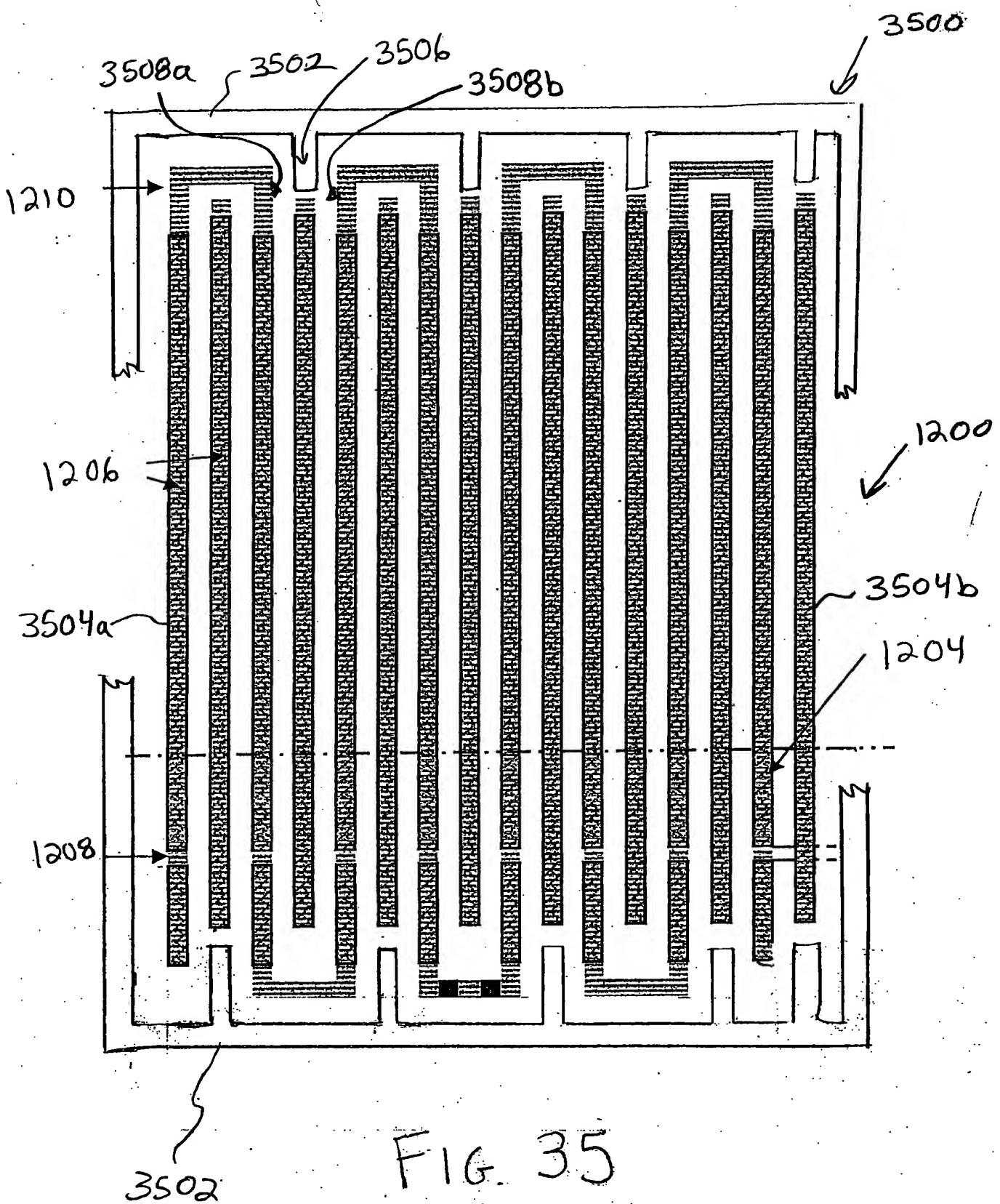


FIG. 34



09648095 - 082500